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www.facebook.com/parrotconservation
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Video of released birds in Brazil
www.palmsforparrots.org

Incorporating Free-flight Training Methods & Knowledge Into Parrot Release, Brazil

Chris Biro, Humberto Mendes, Donald Brightsmith



Abstract

- Six Blue and Yellow macaws (*Ara ararauna*), hatched by breeders for the pet trade, were successfully raised to become wild birds incorporating methods used for free-flight training pet parrots.
- Poor success of released captive-raised parrots is commonly blamed on being captive raised - Roberts and Luther (2023). Little attention has been given to the rearing methods used to raise and release the birds.
- Due to biological similarities the differences in outcomes must be attributed to the rearing practices.
- Managing key areas of behavioral development we can address common problems such as birds disappearing after the initial release or struggling with navigation and evading predators.

Project objectives

- Demonstrate a method of establishing a flock of birds where no similar birds currently exist
- Demonstrate value of pet trade birds, knowledge & experience to parrot conservation.

All 6 macaws living with no human support as wild birds for one year, 100% Survival



Six pet trade hatched macaws released in Brazil



**2 December 2023 one year
with no human support**

This project's success highlights the value of understanding the development of behavior and behavior modification techniques when designing release projects



Free-flight training techniques being applied to the release process

Study Background and Introduction

- Project initiated and designed by professional animal trainer Chris Biro based upon concepts developed through 30 years flying parrots in the pet trade
- IBAMA Brazilian permits were obtained by Humberto Mendes, Chris Biro & Donald Brightsmith
- Conservation expertise supplied by Donald Brightsmith
- Release location and birds selected by Humberto Mendes
- Bird training and release performed by Chris Biro and Humberto Mendes
- After release support and monitoring performed by Humberto Mendes

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Humberto F. Mendes - UNIFAL-MG Department of Biology, Alfenas MG, Brazil

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Study site

- The birds were released near Santa Rosa de Viterbo, Brazil, an area with no macaws for over 50 years
- The release location was next to a small naturally forested area surrounded by sugar cane plantations
- The birds were housed in mobile aviary 2x7x3 meters, located under a few tall trees near large open field

Study Species and Sample Sizes

- 6 Blue and Yellow macaws (*Ara ararauna*)
- Chicks acquired age 6-13 weeks old
- The six birds arrived in two groups of three birds, still showing some pin feathers, 11 Feb and 10 May, 2022
- Chicks were tested and treated for minor illness upon arrival and later tested to confirm no remaining detectable illness
- All chicks were eating handfeeding formula upon arrival



Santa Rosa de Viterbo, Brazil



Aviary located on the edge of forested area surrounded by sugar cane plantations



Mobile aviary located in cleared space below several tall trees next to private open pasture with cows



Methods

- At fledging age the birds were carefully exposed to increasingly complex environments selected to match their current skill development
- Initial flight skills and feeding routines were developed inside the mobile aviary
- The birds flight skills progressed as their mental development allowed – these are babies that can only develop various flight skills as their mental ability is ready to support such activities
- See skills development chart on next slide for progression of skills



Startle flight inside the aviary

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Skills Progressed As Planned

- Skill development progressed as expected, similar to raising pet parrots for free-flight
- No birds showed signs of initially leaving the release area. They choose to remain within contact call range of the aviary and the other birds and did not expand their range until skill and confidence increased
- Human interaction was limited to supplying formula from feeding bulb
- #3 show showed signs of human socialization upon arrival and extra effort was made to limit contact with #3
- All 6 birds showed interest in socializing with human caregivers but such advances were rejected and avoided.
- #3 did show stronger signs of interest in humans

After the feeding stations were removed, all six birds did eventually lose interest in humans as expected

Progression Of The Birds Behaviors Journaled Example from 1 June 2022

Behavior	#1	#2	#3	#4	#5	#6
Perching	3	3	3	3	3	3
180 turn on perch	3	3	3	3	3	3
Hop 6 in for food	3	3	3	3	3	3
Hop 2ft for food	3	3	3	3	3	3
Fly 4ft for food	3	3	3	3	3	3
Fly 6ft for food	3	3	3	3	3	3
Fly 12ft for food	3	3	3	3	3	3
Fly 6ft external from trailer	3	3	3	3	3	3
Fly 12ft external from trailer	3	3	3	3	3	3
Fly 30ft external from trailer	3	3	3	3	3	3
Fly 50ft external from trailer	3	3	3	3	3	3
Fly 70ft external from trailer	3	3	3	-	-	-
Navigating while Flying circular flights near aviary	3	3	3	3	3	3
Navigating while Flying circular flights far from aviary	3	3	3	3	3	3
Social Flock flying	3	3	3	3	3	3
Defensive Flocking	2	2	2	2	2	2
Alarm/Startle Flights	2	2	2	2	2	2
Tree landings	3	3	3	3	3	3
Defensive Perching	2	2	2	2	2	2
At liberty 4 hours before 1 feeding	3	3	3	3	3	3
At liberty 8 hours before 2 feedings	3	3	3	3	3	3
At liberty 24 hours, with supplemental feeding	2	2	2	2	2	2
At liberty 24 hours, no supplemental feeding	-	-	-	-	-	-
Eating solid foods from feeder	1	2	2	1	1	1
Chewing on foods in trees	1	1	1	1	1	1
Feeding self on local foods						
Navigating to distant points and returning – likely to be expanded	0	0	0	0	0	0

Legend: - no opportunity, 0 Mentally not ready, 1 Beginning, 2 Mid level 3 Mastered

Breaking Bonds With Humans

- This project depended heavily on several natural processes, including instinctive drift and the natural dispersal phase
- **Instinctive drift** are the instinctive tendencies influencing trained behavior in the direction of natural behaviors
- **The natural dispersal phase** is where the chicks' bond with the parents is naturally severed, allowing them to leave and start their own lives
- **This process occurs once the birds have learned to find local foods**
- During this phase pet birds can overcome significant early human socialization. Special effort is required to ensure this does not occur with free-flighted pets
- This is a vulnerable period of this process because it takes only a few feedings during this time frame to establish ongoing interest in humans as potential sources of food

So long as humans do not feed the birds during this phase, they will naturally lose interest in people

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Major finding(s)

- By utilizing the natural processes involved with early childhood development, we effortlessly overcame several common release problems

The issues of human socialization, leaving the release site and not returning, poor predator avoidance and lack of flocking were not issues for our birds

We Believe

- Getting the birds flying at natural fledging age calibrates their instinctive tendencies to this specific release environment, similar to how this occurs with wild hatched chicks
- Keeping them in large cages during this time frame calibrates their instinctive tendencies to life inside a big cage
- Understanding how behavior develops and functions can improve release process design and success



Biologist Humberto Mendes practices flying his pet birds at the release site.

Then translates that knowledge to releasing our project birds to live as wild birds



Four released macaws adapted to this specific release environment

Practical application(s)

- Areas where there are no longer any birds of a particular species may be easily repopulated using this approach, assuming there are captive raised birds available for such projects
- Additional birds can be more easily added once this core group is established – we've had excellent results releasing additional amazon parrots into the initial core release group with subsequent releases in Colombia 2023



Released macaw flying over sugar cane field

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Changing Precedent

- For decades the Snyder Thick-billed parrot release has been cited as a reason not to use captive raised birds for parrot conservation release.
- We here lay that claim to rest. **It is not that the birds are captive raised or pet trade birds that is the issue, but rather HOW they are raised that matters.**
- We have since also had success releasing young government confiscated amazon parrots and blue & yellow macaws in Colombia, further demonstrating this concept.

Literature Cited

Thick-Billed Parrot Releases in Arizona,
Noel F. R. Snyder, Susan E. Koenig, James Koschmann, Helen A. Snyder, Terry B. Johnson (1994)

<https://doi.org/10.2307/1369097>

Parrot Free-Flight as a Conservation Tool,
Woodmn, Biro, Brightsmith (2021)

<https://doi.org/10.3390/d13060254>

Mini Documentary Video of this release
palmsforparrots.org

The success of this project suggests that captive populations have significant conservation value if raised and released correctly

This establishes the importance of maintaining sufficient breeding populations of any species that might be subject to extinction in the wild.



This project's success also demonstrates that significant knowledge and skills valuable to parrot conservation can be recruited from pet trade enthusiasts

**Thank you
Don and Humberto**

This project would never have happened without our full team



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